

## **REMARKS/ARGUMENTS**

This is meant to be a complete response to the final office action mailed on October 17, 2007. The following is a disposition of the claims: Claims 37, 45, 55, and 57 are currently amended and claims 38-44, 46-54, 56, and 58-59 are previously presented.

### **New Matter**

Applicant respectfully submits that everything added to the amended claims has support in the original disclosure, thus should not be considered new matter.

### **Claim Rejections - 35 USC § 103**

In the office action dated October 17, 2007, the Examiner rejected claims 37-45 and 50-59 under 35 U.S.C. 103(a) as being unpatentable over Helf in view of Harvey et al.

Applicant respectfully submits that the above stated rejection of Applicant's claims 37-45 and 50-59 under 35 U.S.C. 103(a) is traversed. That is, it is respectfully submitted that the prior art references of Helf and Harvey et al., whether viewed singularly or in combination, do not disclose, teach or even suggest the invention recited in claims 37, 45, 55, and 57.

Applicant's independent claim 37, as presently amended, is directed to a method of selecting an asphalt mixture for making an interlayer for a

roadway which includes the steps of providing at least one asphalt mixture comprised of a polymer-modified binder and hard aggregate wherein the hard aggregate is present in the at least one asphalt mixture in an amount greater than about 15% by weight; performing a stability test on said at least one asphalt mixture; performing a fatigue test on said at least one asphalt mixture; and

selecting an asphalt mixture for said interlayer after performing said stability and fatigue tests based on stability and fatigue performance of said at least one asphalt mixture.

Similarly, independent claim 45, as presently amended, is directed to a method of reconstructing a roadway which includes the steps of providing at least one asphalt mixture comprised of a polymer-modified binder and hard aggregate wherein the hard aggregate is present in the at least one asphalt mixture in an amount greater than about 15% by weight; performing a stability test on said at least one asphalt mixture; performing a fatigue test on said at least one asphalt mixture; selecting an asphalt mixture for an interlayer after performing said stability and fatigue tests based on stability and fatigue performance of said at least one asphalt mixture; applying said selected asphalt mixture as said interlayer to said roadway; determining a desired thickness of an overlay to be applied to said interlayer based on traffic levels; and applying said overlay to said interlayer in said desired thickness.

Additionally, independent claim 55, as presently amended, is directed to a method of making an interlayer for a roadway which includes the steps of forming an asphalt mixture comprised of a polymer-modified asphalt binder and hard aggregate wherein the hard aggregate is present in the asphalt mixture in an amount greater than about 15% by weight, said asphalt mixture having a Hveem Stability at 60°C and 50 gyrations of at least about 18 and a Flexural Beam Fatigue of at least about 100,000 cycles at 2000 microstrains, 10 Hz, about 2-4% air voids, and at a temperature of about 0 to 30°C; and forming an interlayer for a roadway from said asphalt mixture.

Similar to independent claims 37, 45, and 55, independent claim 57, as presently amended, is directed to a method of selecting an asphalt mixture for making an interlayer for a roadway which includes the steps of performing a ductility test on at least one polymer-modified binder; selecting a binder for making an asphalt mixture after performing said ductility test and based on said ductility test; providing at least one asphalt mixture comprised of said selected binder and hard aggregate wherein the hard aggregate is present in the at least one asphalt mixture in an amount greater than about 15% by weight; performing a stability test on said at least one asphalt mixture; performing a fatigue test on said at least one asphalt mixture; and selecting an asphalt mixture for said interlayer after

performing said stability and fatigue tests based on stability and fatigue performance of said at least one asphalt mixture.

The Helf reference teaches an asphalt composition containing asphalt, a terpenoid liquid, a rubber, and a flexible aggregate. The Helf reference defines in column 5, lines 20-23 that a "flexible aggregate is not hard material, but instead a soft or rubbery material." The Helf reference further teaches in column 5, lines 31-42:

"The flexible aggregate is flexible unlike hard aggregate such as sand, pebbles or rock. In a most preferred embodiment, the asphalt composition of the present invention does not contain inflexible or hard aggregate such as sand, pebbles or rock, although inflexible aggregate may be optionally added to the asphalt composition of the present invention in some instances. In another embodiment, the asphalt composition of the present invention contains less than about 10% by weight, preferably less than about 5% by weight, and more preferably less than about 1% by weight hard aggregate."

Thus, the Helf reference draws a distinction between what is considered flexible aggregate and hard aggregate. The Helf reference also defines a limit to how much inflexible, or hard, aggregate may be included in the asphalt composition.

The Helf reference does not teach or describe the step of providing or forming an asphalt mixture comprised of a polymer-modified binder and a hard aggregate wherein the hard aggregate is present in the at least one asphalt mixture in an amount greater than about 15% by weight.

Contrary to the Examiner's position, it is respectfully submitted that the Harvey et al. reference does not supply the deficiencies of the teachings of the Helf reference. The Harvey et al. reference describes a project to evaluate the effects of asphalt content and air-void content of the fatigue response of a typical California asphalt concrete mix and to develop recommendations for improving the fatigue performance of asphalt concrete pavements in California. Also, the project was to begin demonstration and adaptation of the testing and analysis procedures developed for use in the design and analysis of California asphalt concrete mixes and asphalt concrete pavements for improved fatigue performance.

Like the Helf reference, the Harvey et al. reference does not teach or describe the step of providing or forming an asphalt mixture comprised of a polymer-modified binder and a hard aggregate wherein the hard aggregate is present in the at least one asphalt mixture in an amount greater than about 15% by weight.

For the reasons set forth above, it is respectfully submitted that the Helf reference does not disclose the elements of independent claims 37, 45, 55, and 57; and the Harvey et al. reference does not supply the deficiencies of the Helf reference. Neither reference, either singularly or in combination discloses, teaches or even suggests the step of providing or forming an asphalt mixture comprised of a polymer-modified binder and a hard

aggregate wherein the hard aggregate is present in the at least one asphalt mixture in an amount greater than about 15% by weight.

In view of the above, it is respectfully requested that the Examiner withdraw the rejection of independent claims 37, 45, 55, and 57, and thus claims 38-44, 51-54, 56, and 58-59 for depending therefrom, under 35 U.S.C. 103(a), as applicable to claims now pending in the application.

### **Claim Rejections - 35 USC § 103**

In the office action, the Examiner rejected claims 46-47 and 49 under 35 U.S.C. 103(a) as being unpatentable over Helf in view of Harvey et al., as applied to the claim 45, and further in view of Walter.

Applicant respectfully submits that the above-stated rejection of Applicant's claims 46-47 and 49 under 35 U.S.C. 103(a) is traversed. That is, it is respectfully submitted that the prior art references of Helf, Harvey et al., and Walter, whether viewed singularly or in combination, do not disclose, teach or even suggest the invention recited in independent claim 45, and thus claims 46-47 and 49 which depend therefrom.

For the reasons set forth above, it is respectfully submitted that the Helf reference, and the Harvey et al. reference, do not render obvious the inventive concept recited in independent claim 45, and thus claims 46-47 and 49 which depend therefrom. Further, Applicant submits that the Walter

reference does not teach or suggest the deficiencies of the combination of Helf and Harvey et al.

The Walter reference teaches an asphaltic pavement course composition utilizing the residue from a refuse incinerator as the major ingredient. The residue of the refuse incinerator is primarily low-ferrous. The asphaltic pavement also contains asphalt, mineral aggregates, and, optionally, lime.

Like the Helf reference and the Harvey et al. reference, the Walter reference does not teach or describe the step of providing or forming an asphalt mixture comprised of a polymer-modified binder and a hard aggregate wherein the hard aggregate is present in the at least one asphalt mixture in an amount greater than about 15% by weight.

For the reasons set forth above, it is respectfully submitted that the Helf reference and the Harvey et al. reference do not disclose the elements of independent claim 45; and the Walter reference does not supply the deficiencies of the combination of the Helf reference and the Harvey et al. reference. Neither reference, either singularly or in combination discloses, teaches or even suggests the step of providing or forming an asphalt mixture comprised of a polymer-modified binder and a hard aggregate wherein the hard aggregate is present in the at least one asphalt mixture in an amount greater than about 15% by weight.

In light of the foregoing, Applicant respectfully requests the reconsideration and withdrawal of the rejection of claims 46-47 and 49 under 35 U.S.C. 103(a).

### **Claim Rejections - 35 USC § 103**

In the office action, the Examiner rejected claim 48 under 35 U.S.C. 103(a) as being unpatentable over Helf in view of Harvey, et al. and Walter, as applied to claim 45 above, and further in view of McDonald.

Applicant respectfully submits that the above-stated rejection of Applicant's claim 48 under 35 U.S.C. 103(a) is traversed. That is, it is respectfully submitted that the prior art references of Helf, Harvey et al., Walter, and McDonald, whether viewed singularly or in combination, do not disclose, teach or even suggest the invention recited in independent claim 45, and thus claim 48 which depends therefrom.

For the reasons set forth above, it is respectfully submitted that the Helf reference, the Harvey et al. reference, and the Walter reference, do not render obvious the inventive concept recited in independent claim 45, and thus claims 48 which depends therefrom. Further, Applicant submits that the McDonald reference does not teach or suggest the deficiencies of the combination of Helf, Harvey et al., and Walter.

The McDonald reference teaches an elastomeric pavement repair composition comprised of paving grade asphalt and rubber and a method of



applying the elastomeric pavement repair composition. After applying the elastomeric pavement repair composition to the pavement, sand or mineral aggregate is applied on top of the elastomeric pavement repair composition.

Like the Helf reference, the Harvey et al. reference, and the Walter reference, the McDonald reference does not teach or describe the step of providing or forming an asphalt mixture comprised of a polymer-modified binder and a hard aggregate wherein the hard aggregate is present in the at least one asphalt mixture in an amount greater than about 15% by weight.

For the reasons set forth above, it is respectfully submitted that the Helf reference, the Harvey et al. reference, and the Walter reference do not disclose the elements of independent claim 45; and the McDonald reference does not supply the deficiencies of the combination of the Helf reference, the Harvey et al. reference, and the Walter reference. Neither reference, either singularly or in combination discloses, teaches or even suggests the step of providing or forming an asphalt mixture comprised of a polymer-modified binder and a hard aggregate wherein the hard aggregate is present in the at least one asphalt mixture in an amount greater than about 15% by weight.

In light of the foregoing, Applicant respectfully requests the reconsideration and withdrawal of the rejection of claim 48 under 35 U.S.C. 103(a).

## CONCLUSION

It is respectfully submitted that this application, as now amended, is in condition for allowance for the reasons stated above. Therefore, it is requested that the Examiner reconsider each and every rejection as applicable to the claims pending in the application and pass such claims to an expedient issue.

The foregoing is meant to be a complete response to the Office Action mailed October 17, 2007.

In the event that any outstanding issues remain that would delay the allowance of this application, the examiner is urged to contact the undersigned to telephonically discuss such outstanding issues.



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